

Objection to the Specification

The Examiner has objected to the Title of the Invention as being non-descriptive. Further, the Examiner has required an Abstract on a separate sheet.

In order to overcome the objections, Applicant has amended the title and provided an Abstract on a separate sheet. Further, Applicant has thoroughly reviewed the specification and made several other amendments to correct minor informalities.

Accordingly, reconsideration and withdrawal of these objections are respectfully requested.

Drawing Changes

Applicant has submitted for the Examiner's approval, changes to Figure 3. The changes have been indicated in red ink in a separate Letter to the Official Draftsperson. Specifically, reference numerals 10, 20, 30 and 40 have been inserted. Support for the reference numerals can be found in Applicant's specification on page 10, lines 35-36 and page 11, line 30.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 1-8 stand rejected under 35 U.S.C. § 112, first paragraph. This rejection is respectfully traversed.

The Examiner takes issue with the terminology "compelling" and "data element type." The Examiner suggests that the term "compelling" would be more accurately referred to as "required."

Applicant thanks the Examiner for the suggestion. Applicant has amended the specification on page 6, line 4 to more clearly indicate that "compelling" does indicate that an action is "required." Further, Applicant has amended the specification on page 4, lines 28-29 to provide a definition of "data element type" which is more definite. The examples stated in defining "data element type" can be found in Applicant's specification in the table at the top of page 5, and on page 12, lines 8 and 15-16.

It is respectfully submitted that the terminology objected to by the Examiner has been clarified in the application. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 4 stands rejected under 35 U.S.C. § 112, second paragraph. This rejection is respectfully traversed.

The Examiner takes issue with the terminology "the PTY principle." The Examiner states that the term lacks antecedent basis and that the acronym "PTY" is not defined.

In order to overcome this rejection, Applicant has amended claim 4. It is respectfully submitted that the term now has proper antecedent basis. Further, it is respectfully submitted that the term is well defined, as set forth in Applicant's specification on page 2, lines 22-30. In accordance with MPEP § 2173.05(a), Applicant need not confine himself to the terminology used in the prior art. Rather, when the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning.

Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 1-2 and 5-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *McDonnal et al.* Claims 3-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *McDonnal et al.* and further in view of Applicant's admitted prior art. These rejections are respectfully traversed.

McDonnal et al. are concerned with a method and apparatus for encrypting and decrypting information stored in a computer. However, *McDonnal et al.* fail to show, or remotely suggest, many of the features of the present invention, as set forth in independent claims 1, 8 and 9.

McDonnal et al. disclose a file management system. The primary focus of *McDonnal et al.* is to distinguish between files to be encrypted and files not to be encrypted. As set forth in column 8, lines 35-49, there are several directories located in a memory section of a computer system. If a directory contains files which should be encrypted and decrypted, that directory will be called a secure directory. Each secure directory is identified in a "secured directories list."

The "secured directories list" does not include any encryption and/or decryption algorithms. Rather, the "secured directories list" simply identifies which directories contain files which need encryption protection.

Each secured directory includes a hidden "recryption rule file." The "recryption rule file" defines the algorithm used to decrypt and encrypt files located in that particular secured directory. In column 8, lines 45-49, *McDonnal et al.* state that each secured directory may contain a unique "encryption rule file." However, it is important to note that a plurality of "recryption rule files" would exist in *McDonnal et al.*'s system and method. Each secure directory contains its own "recryption rule file," albeit a unique file or a file identical to another rule file of another secured directory.

The present invention offers many distinctions over the system of *McDonnal et al.* The present invention relates to a database management system. As is well known, a database management system is quite distinct, in its operation and capabilities, from a file management system. For example, a database management system emphasizes data access, as opposed to a file management system which emphasizes data storage.

As recited in Applicants independent claims, each data element value is categorized into a data element type. In a second database, a data element protection catalogue is stored. The data element protection catalog includes an entry for each individual data element type and also contains the protection attribute for that particular data element type.

Every time a user attempts to access a data element value, the data element protection catalog is called, using the data element type of the data element value, to determine the protection attribute for the data element value.

McDonnal et al. is quite distinct from the present invention. In *McDonnal et al.*, each file saved in a "secure directory" is subjected to the protection attributes stored in that secure directory's "recryption rule file." *McDonnal et al.* does not show or teach a recryption rule file allowing for data element values

(or even files) to be encrypted at different protection attributes, based upon their respective data element type.

The present invention provides protection on a data item level, i.e., a protection with much finer granularity. This makes it possible to protect data in databases effectively and with different levels of security, depending on the sensitivity of the particular data. *McDonnal et al.* does not offer such fine granularity. In *McDonnal et al.*, all data in a file is encrypted when the file is encrypted. Further, all files in a secure directory are encrypted in accordance with that secure directory's recryption rule file.

In conclusion, *McDonnal et al.* fail to show or suggest a database management system capable of protecting data on a data item level, and capable of offering different levels of security depending on the sensitivity of the data, in the combinations as presently claimed. *McDonnal et al.* fail to show or suggest a data element protection catalog which contains each individual data element type and also contains one or more protection attributes stating processing rules for data element values corresponding to the data element types, in the combinations as presently claimed.

Accordingly, reconsideration and withdrawal of these rejections are respectfully requested.

CONCLUSION

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), the Applicant respectfully petitions for a two (2) month extension of time for filing a response in connection with the present application and the required fee of \$380.00 is attached hereto.

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and as such, the present application is in condition for allowance.

In the event there are any outstanding matters remaining in this application the Examiner is invited to contact Mr. Scott L. Lowe (Reg. No. 41,458) at (703) 205-8000 in the Washington, D.C. area to discuss these matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17, particularly, extension of time fees.

Respectfully submitted,

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